

Training school for graduating students, PhD students and young researchers. Are spin-statistics connection and quantum theory exact? The endeavor for the theory beyond the standard quantum mechanics. FQT2016

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Lecture 10 Evaluation of the energy shift for the Pauli-forbidden X-ray transitions

Wednesday, 21 December 2016 10:00 (1 hour)

Abstract: We describe how the energy shift for the Pauli-forbidden X-ray transitions is calculated within the Dirac-Fock theory. We start from the general expression for the cross-section of usual, Pauli-allowed, X-ray transitions and then explain what changes should be considered in the Pauli-forbidden case. The specific cases of copper (the material of choice for VIP experiment), lead and gold are described.

We finish the presentation with a brief methodological and philosophical discussion about the role of the time in these calculations and the role of the time in the antisymmetrization of the electrons

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